

SHIPP, A.

Appl. No. 10/500,954

Response to Office Action dated May 18, 2006



AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently Amended): An anti-malware ~~anti-virus~~ file scanning system for computer files being transferred between computers, the system comprising:

a) a computer database containing records of known executable programs which are deemed to be not malware and criteria by which a file being processed can be determined to be an instance of one of those programs, the criteria including at least one characteristic signature associated with each said instance;

b) means for processing a file being transferred between computers, the means
b) comprising:

a file recogniser operative to determine whether the file being processed is an instance of a known program by checking the contents of the file being processed for the presence of said at least one characteristic signature associated with the said instances;
and

a difference checker operative, in the case that the file recogniser determines the file being processed to be an instance of a known program, to check whether the file is an unchanged version of that known program to determine whether the file matches the criteria characterising a file as an unchanged instance of a program in the database; and

c) means for signalling the file, ~~as known or not~~ depending on the determination made by the processing means, as being:

likely to be not malware if it is an unchanged version of a known file;

likely to be malware if it is a changed version of a known file; or

of unknown status if it is not determined as being an instance of a known file.

Claim 2 (Currently Amended): A system according to claim 1 and including:

d) means for processing ~~a an-inputted~~ file being transferred between computers to determine whether it is considered to be, or considered possibly to be, malware infected with a virus, and wherein the means d) is operative to subject, in operation of the system, a file is subjected to processing if the file is signalled by the means d) unless the file is signalled as safe by the signalling means c) as being of unknown status.

Claims 3 and 4 (Canceled).

Claim 5 (Currently Amended): A system according to claim 1 wherein the difference checker is operative to generate processing means b) includes means for generating a checksum for the entire file under consideration or for at least one selected region thereof, and to compare means for comparing the checksum or checksums with those of entries in the database.

Claim 6 (Currently Amended): A system according to claim 1 and including an exception list handler operative to determine for determining, in relation to a file which the processing means b) has determined is a changed version of not a known file, whether that file has characteristics matching an entry in an exception list of files, ~~and~~ the signalling means c) being is operative to signal the file as malware only if it is not in the exception list or as being of unknown status otherwise if it is.

Claim 7 (Currently Amended): A method of anti-malware anti-virus scanning ~~system~~ computer files being transferred between computers, the method comprising:
maintaining a computer database containing records of known executable programs which are deemed to be uninfected and criteria by which a file being processed

can be determined to be an instance of one of those programs, the criteria including at least one characteristic signature associated with each said instance;

processing a file being transferred between computers ~~to determine whether the file matches the criteria characterising a file as an unchanged instance of a program in the database by~~

determining whether the file being processed is an instance of a known program by checking the contents of the file being processed for the presence of said at least one characteristic signature associated with the said instances, and

checking, in the case that the file is determined to be an instance of a known program, whether the file is an unchanged version of that known program; and

signalling the file, ~~as known or not~~ depending on the determination made by the processing means, as being:

likely to be not malware if it is an unchanged version of a known file;

likely to be malware if it is a changed version of a known file; or

of unknown status if it is not determined as being an instance of a known file.

Claim 8 (Currently Amended): A method according to claim 7 and including:
processing ~~a an inputted file~~ being transferred between computers to determine whether it is considered to be, or considered possibly to be, malware, if the file is signalled by infected with a virus, and wherein, in operation of the system, a file is subjected to processing by the step d) unless the file is signalled as safe by the signalling step c) as being of unknown status.

Claims 9 and 10 (Canceled).

Claim 11 (Currently Amended): A method according to claim 7 wherein the step of checking whether the file being processed is an instance of a known program comprises the processing step b) includes generating a checksum for the entire file under

consideration or for at least one selected region thereof, and comparing the checksum or checksums with those of entries in the database.

Claim 12 (Currently Amended): A method according to claim 7 further ~~and~~ including using an exception list to determine, in relation to a file which the processing step b) has determined is a changed version of ~~not~~ a known file, whether that file has characteristics matching an entry in an exception list of files, and wherein, in the signalling step c) steps, the file is signalled as malware if it is not in the exception list or as being of unknown status otherwise ~~if it is~~.

Claim 13 (New): An anti-malware file scanning system for computer files being transferred between computers, the system comprising:

a computer database containing records of known executable programs which are deemed to be not malware and criteria by which a file being processed can be determined to be an instance of one of those programs, the criteria including at least one characteristic signature associated with each said instance;

a processor for processing a file being transferred between computers, the processor being operative to determine whether the file being processed is an instance of a known program by checking the contents of the file being processed for the presence of said at least one characteristic signature associated with the said instances and, in the case that the file being processed is determined to be an instance of a known program, to check whether the file is an unchanged version of that known program,

said processor, depending on the determination, identifying the file being processed as (i) likely to be not malware if it is an unchanged version of a known file; (ii) likely to be malware if it is a changed version of a known file; or (iii) of unknown status if it is not determined as being an instance of a known file.

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Claim 14 (New): An anti-malware file scanning system according to claim 13, further comprising:

a file-scanning subsystem for scanning files identified by the processor as being of unknown status to determine whether the scanned files are malware.

Claim 15 (New): An anti-malware file scanning system according to claim 14, wherein records for files which are instances of programs determined by the file-scanning system not to be malware are added to the computer database.

Claim 16 (New): An anti-malware file scanning system according to claim 13, wherein the processor assigns a score to a file identified as likely to be malware.